

Comparisons of Job Characteristics

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Nuclear Engineers (17-2161)

[Compare Knowledge](#)

[Compare Skills](#)

[Compare Abilities](#)

[Compare Detailed Work Activities](#)

[Compare Tools and Technologies](#)

| | |
|----|--|
| << | Focus occupation element is much lower |
| < | Focus occupation element is lower |
| 0 | Focus occupation element is at a similar level |
| > | Focus occupation element is at a higher level |
| >> | Focus occupation element is at a much higher level |

Knowledge

Similarity of Focus Occupation to Associated Occupation: 87

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Nuclear Engineers (17-2161)

| Associated Occupation's Key Knowledge Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | | Evaluation of Focus Occupation |
|--|---------------------------------|--------------------------------|---------------------------|----|--|
| Engineering and Technology | 5.7 | 24.3 | 23.2 | 0 | Current knowledge level may be sufficient |
| Physics | 4.3 | 20.8 | 13.0 | << | Extensive education and/or training may be required |
| Mathematics | 9.2 | 19.9 | 17.4 | < | Expanded education and/or training may be required |
| Design | 5.2 | 17.3 | 19.0 | 0 | Current knowledge level may be sufficient |
| Chemistry | 4.8 | 16.2 | 6.6 | << | Extensive education and/or training may be required |
| Computers and Electronics | 8.4 | 15.9 | 16.9 | 0 | Current knowledge level may be sufficient |
| Public Safety and Security | 6.9 | 14.2 | 10.0 | << | Extensive education and/or training may be required |
| Mechanical | 6.8 | 13.6 | 10.4 | << | Extensive education and/or training may be required |
| Administration and Management | 8.4 | 13.0 | 14.4 | > | Current knowledge level is likely sufficient |
| Law and Government | 5.9 | 9.9 | 8.6 | < | Expanded education and/or training may be required |
| Building and Construction | 4.0 | 8.2 | 10.7 | >> | Current knowledge level is likely more than sufficient |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 75

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Nuclear Engineers (17-2161)

| Associated Occupation's Key Skills Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation |
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|
|---|---------------------------------|--------------------------------|---------------------------|--------------------------------|

| | | | | | |
|--------------------------|------|------|------|----|--|
| Operations Analysis | 5.0 | 15.7 | 13.9 | < | A higher skill level may be required |
| Critical Thinking | 10.8 | 14.8 | 12.8 | < | A higher skill level may be required |
| Science | 4.5 | 14.1 | 8.7 | << | Extensive development of skills in this area may be required |
| Systems Analysis | 6.5 | 12.6 | 10.7 | < | A higher skill level may be required |
| Operation Monitoring | 6.6 | 12.0 | 4.4 | << | Extensive development of skills in this area may be required |
| Mathematics | 6.2 | 11.9 | 11.7 | 0 | Current skill level may be sufficient |
| Systems Evaluation | 6.4 | 11.8 | 10.7 | < | A higher skill level may be required |
| Quality Control Analysis | 5.9 | 10.7 | 7.0 | << | Extensive development of skills in this area may be required |
| Technology Design | 2.6 | 6.4 | 3.3 | << | Extensive development of skills in this area may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 97

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Nuclear Engineers (17-2161)

| Associated Occupation's Key Abilities Elements | Average Rating, All Occupations | Associated Occupation's Rating | Focus Occupation's Rating | Evaluation of Focus Occupation | |
|--|---------------------------------|--------------------------------|---------------------------|--------------------------------|--|
| Oral Comprehension | 12.5 | 17.0 | 15.0 | < | Some improvement in abilities may be required |
| Problem Sensitivity | 11.1 | 16.6 | 13.9 | < | Some improvement in abilities may be required |
| Written Comprehension | 11.0 | 16.2 | 15.2 | 0 | Current ability level may be sufficient |
| Oral Expression | 12.4 | 16.0 | 15.0 | 0 | Current ability level may be sufficient |
| Written Expression | 9.8 | 14.8 | 13.8 | 0 | Current ability level may be sufficient |
| Inductive Reasoning | 10.2 | 13.9 | 12.5 | < | Some improvement in abilities may be required |
| Deductive Reasoning | 10.6 | 13.8 | 13.9 | 0 | Current ability level may be sufficient |
| Category Flexibility | 9.0 | 12.2 | 11.4 | 0 | Current ability level may be sufficient |
| Mathematical Reasoning | 6.3 | 11.2 | 13.3 | > | Current ability level is likely sufficient |
| Number Facility | 6.3 | 10.6 | 11.2 | 0 | Current ability level may be sufficient |
| Perceptual Speed | 7.4 | 10.2 | 6.9 | << | Extensive improvement in abilities may be required |

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 81

Focus Occupation: Architectural and Engineering Managers (11-9041)

Associated Occupation: Nuclear Engineers (17-2161)

| Work Activities | Exclusivity of Activity |
|---|-------------------------|
| Adhere to safety procedures | 12 |
| Advise clients or customers | 19 |
| Advise clients regarding engineering problems | 67 |
| Analyze project proposal to determine feasibility, cost, or time | 69 |
| Bid engineering, construction or extraction projects | 80 |
| Communicate technical information | 4 |
| Confer with engineering, technical or manufacturing personnel | 25 |
| Coordinate engineering project activities | 71 |
| Delegate authority for engineering activities | 73 |
| Develop policies, procedures, methods, or standards | 21 |
| Develop safety regulations | 74 |
| Direct and coordinate activities of workers or staff | 3 |
| Direct personnel in support of engineering activities | 74 |
| Estimate cost for engineering projects | 69 |
| Estimate time needed for project | 64 |
| Evaluate costs of engineering projects | 70 |
| Evaluate engineering data | 60 |
| Lead teams in engineering projects | 73 |
| Perform statistical analysis in physical science or geological research | 71 |
| Plan testing of engineering methods | 72 |
| Prepare reports | 8 |
| Prepare technical reports or related documentation | 22 |
| Read blueprints | 10 |
| Read schematics | 34 |
| Read technical drawings | 7 |
| Resolve engineering or science problems | 46 |
| Understand engineering data or reports | 48 |
| Understand technical operating, service or repair manuals | 6 |
| Use intuitive judgment for engineering analyses | 72 |
| Use long or short term production planning techniques | 74 |
| Use pollution control techniques | 62 |
| Use project management techniques | 47 |
| Use scientific research methodology | 21 |
| Use technical regulations for engineering problems | 61 |
| Write business project or bid proposals | 48 |

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 39

Focus Occupation: Architectural and Engineering Managers (11-9041)
Associated Occupation: Nuclear Engineers (17-2161)

| Tools and Technologies | Exclusivity |
|--|-------------|
| Computers | 1 |
| Content authoring and editing software | 1 |
| Data management and query software | 1 |
| Industry specific software | 1 |
| Safety apparel | 4 |

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.